CLAIMS

We claim:

1. A method of screening drug candidates comprising:

a) providing a cell that expresses an expression profile gene encoding CZA8 or fragment thereof;

b) adding a drug candidate to said cell; and

c) determining the effect of said drug candidate on the expression of said expression profile gene.

2. A method according to claim 1 wherein said expression profile gene encodes the CZA8 sequence of Figure 2 (SEQ ID NO:2).

3. A method according to claim 1 wherein said expression profile gene encodes the CZA8 sequence of Figure 5 (SEQ ID NO:4).

4. A method according to claim 1 wherein said determining comprises comparing the level of expression in the absence of said drug candidate to the level of expression in the presence of said drug candidate.

5. A method of screening for a bioactive agent capable of binding to CZA8 or a fragment thereof, said method comprising:

a) combining said CZA8 or a fragment thereof and a candidate bioactive agent; and

b) determining the binding of said candidate agent to said CZA8 or a fragment thereof.

6. A method for screening for a bioactive agent capable of modulating the activity of CZA8, said method comprising:

a) combining CZA8 and a candidate bioactive agent; and

b) determining the effect of said candidate agent on the bioactivity of CZA8.

7. A method according to claim 6 wherein said CZA8 comprises the sequence shown in Figure 2 (SEQ ID NO:2).

8. A method according to claim 6 wherein said CZA8 comprises the sequence shown in Figure 5 (SEQ ID NO:4).

9. A method of evaluating the effect of a candidate cancer drug comprising:

a) administering said drug to a patient;

b) removing a cell sample from said patient; and

c) determining the expression of a gene encoding CZA8 or fragment thereof.

10. A method according to claim 9 further comprising comparing said expression profile to an expression profile of a healthy individual.

11. A method of diagnosing cancer comprising:

a) determining the expression of a gene CZA8 or a fragment thereof in a first tissue type of a first individual; and

b) comparing said expression of said gene(s) from a second normal tissue type from said first individual or a second unaffected individual;

wherein a difference in said expression indicates that the first individual has cancer.

12. An antibody which specifically binds to CZA8 or a fragment thereof.

13. The antibody of claim 12, wherein said CZA8 is that shown in Figure 2 (SEQ ID NO:2).

14. The antibody of claim 12, wherein said CZA8 is that shown in Figure 5 (SEQ ID NO:4).

15. The antibody of Claim 12, wherein said antibody is a monoclonal antibody.

16. The antibody of Claim 12, wherein said antibody is a humanized antibody.

17. The antibody of Claim 12, wherein said antibody is an antibody fragment.

18. The antibody of Claim 12, wherein said antibody modulates the bioactivity of CZA8.

19. The antibody of Claim 18, wherein said antibody is capable of inhibiting the bioactivity or neutralizing the effect of CZA8.

20. A method for screening for a bioactive agent capable of interfering with the binding of CZA8 or a fragment thereof and an antibody which binds to CZA8 or fragment thereof, said method comprising:

a) combining CZA8 or fragment thereof, a candidate bioactive agent and an antibody which binds to CZA8 or fragment thereof; and

b) determining the binding of CZA8 or fragment thereof and said antibody.

21. A method according to Claim 20, wherein said antibody is capable of inhibiting or neutralizing the bioactivity of CZA8.

22. A method for inhibiting the activity of CZA8, said method comprising binding an inhibitor to CZA8.

23. A method according to claim 22 wherein said inhibitor is an antibody.

24. A method of neutralizing the effect of CZA8 or a fragment thereof, comprising contacting an agent specific for said CZA8 or fragment thereof with said CZA8 or fragment thereof in an amount sufficient to effect neutralization.

25. A method of treating breast cancer and/or colorectal cancer comprising administering to a patient an inhibitor of CZA8.

26. A method according to claim 25 wherein said inhibitor is an antibody.

27. A method for localizing a therapeutic moiety to breast cancer and/or colorectal cancer tissue comprising exposing said tissue to an antibody to CZA8 or fragment thereof conjugated to said therapeutic moiety.

28. The method of Claim 27, wherein said therapeutic moiety is a cytotoxic agent.

29. The method of Claim 27, wherein said therapeutic moiety is a radioisotope.

30. A method of treating breast cancer or colorectal cancer comprising administering to an individual having said cancer an antibody to CZA8 or fragment thereof conjugated to a therapeutic moiety.

31. The method of Claim 30, wherein said therapeutic moiety is a cytotoxic agent.

32. The method of Claim 30, wherein said therapeutic moiety is a radioisotope.

33. A method for inhibiting breast cancer or colorectal cancer in a cell, wherein said method comprises administering to a cell a composition comprising antisense molecules to a nucleic acid of Figure 1 (SEQ ID NO:1).

34. A method for inhibiting breast cancer or colorectal cancer in a cell, wherein said method comprises administering to a cell a composition comprising antisense molecules to a nucleic acid of Figure 4 (SEQ ID NO:3).

35. A biochip comprising one or more nucleic acid segments encoding CZA8 or a fragment thereof, wherein said biochip comprises fewer than 1000 nucleic acid probes.

36. A method of eliciting an immune response in an individual, said method comprising administering to said individual a composition comprising CZA8 or a fragment thereof.

37. A method of eliciting an immune response in an individual, said method comprising administering to said individual a composition comprising a nucleic acid encoding CZA8 or a fragment thereof.

38. A method for determining the prognosis of an individual with breast cancer or colorectal cancer comprising determining the level of CZA8 in a sample, wherein a high level of CZA8 indicates a poor prognosis.

39. A polypeptide comprising the amino acid sequence as set forth in Figure 2 (SEQ ID NO:2) or Figure 5 (SEQ ID NO:4).

40. A polypeptide which is a fragment of and which comprises at least one epitope of a polypeptide having the amino acid sequence as set forth in Figure 2 (SEQ ID NO:2) or Figure 5 (SEQ ID NO:4).

41. A polypeptide having an amino acid sequence that is at least 45% identical to the amino acid sequence set forth in Figure 2 (SEQ ID NO:2) or Figure 5 (SEQ ID NO:4).

42. A polypeptide having an amino acid sequence that is at least 60% homologous to the amino acid sequence set forth in Figure 2 (SEQ ID NO:2) or Figure 5 (SEQ ID NO:4).

43. A polypeptide having an amino acid sequence that is at least 95% identical to the amino acid sequence set forth in Figure 2 (SEQ ID NO:2) or Figure 5 (SEQ ID NO:4).

44. A composition comprising the polypeptide of Claim 39, 40, 41, 42 or 43 and a pharmaceutically acceptable carrier.

44. A nucleic acid comprising the nucleic acid sequence as set forth in Figure 1 (SEQ ID NO:1) or Figure 3 (SEQ ID NO:2).

45. A nucleic acid comprising a nucleic acid sequence encoding the polypeptide of Claim 39 or 40.